

Claims:

1. Preform used for pulling a fibre comprising a bulk part (41) and a head part (42) and the head part (42) is attached to the bulk part (41),
5 **characterised by that** the head part (42) comprises a narrower end (42a) and a wider end (42b), and the wider end (42b) of the head part (42) is connected to the bulk part (41), wherein a heat load directed to said preform will be distributed to the cross section of said bulk (41) part in a predetermined manner.
- 10 2. Preform according to claim 1 **characterised by that** said head part (42) is at least partly cone shaped.
3. Preform according to claim 1 **characterised by that** said head part
15 (42) comprises amorphous material.
4. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are made of compatible materials
- 20 5. Preform according to claim 4 **characterised by that** said bulk part (41) comprises pure or doped quartz and said head part (42) comprises glass.
6. Preform according to claim 4 **characterised by that** said bulk part
25 (41) comprises pure or doped phosphate glass and said head part (42) comprises glass.
7. Preform according to claim 4 **characterised by that** said bulk part (41) comprises pure or doped fluoride glass and said head part (42)
30 comprises glass.
8. Preform according to claim 1 **characterised by that** said head part (42) comprises material increasing the heat absorption.
- 35 9. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are at least partly joined together by process of melting and solidifying.

10. Preform according to claim 1 **characterised by that** said head part (42) and said bulk part (41) are at least partly joined together by a mechanical joint.
- 5 11. Preform according to claim 1 **characterised by that** cross-section of said head part (42) on the side facing said bulk part (41) is substantially equal to the cross-section of said bulk part (41) and the cross-section of said head part (42) opposite to said bulk (41) part is smaller than said cross-section facing said bulk part (41).
- 10 12. Preform according to claim 1 **characterised by that** said bulk part (41) comprises at least one non-homogeneous region.
- 15 13. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises a hole.
- 20 14. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises an amorphous material with an index of reflection difference than the index of reflection of the main material used in said bulk part.
- 25 15. Preform according to claim 12 **characterised by that** said at least one non-homogeneous region comprises an amorphous material that is doped with rare earth.
- 30 16. A head part for a preform of a fibre **characterised by that** said head part (42) comprises a narrower end (42a) and a wider end (42b), and the wider end (42b) of the head part (42) can be connected to the bulk part (41), wherein a heat load directed to said preform will be distributed to the cross section of said bulk (41) part in a predetermined manner.
- 35 17. A head part according to claim 16 **characterised by that** said head part (42) is at least partly cone shaped.
18. A head part according to claim 16 **characterised by that** said head part (42) comprises amorphous material.

19. A head part according to claim 16 **characterised by that** said head part (42) comprises material increasing the heat absorption.

5 20. Method for manufacturing a fibre from a perform that comprises a bulk part (41) and a head part (42) is attached to the bulk part (41), the method comprising the steps of

10 heating a preform so that a surface of the preform is at least partly transformed to a form suitable for pulling a fibre and

directing a pulling effect to at least the transformed part of the preform,

15 **characterised by that** the method further comprising the step of controlling at least in the beginning of the heating process at least a part of a heat load directed to said preform by a head part (42) comprising a narrower end (42a) and a wider end (42b) wherein the wider end (42b) of the head part is attached to the bulk part (41).

20 21. Method according to claim 20 **characterised by that** said step of controlling is such that the heat load is more evenly distributed to the cross section of said surface that it would be without said head part (42).

25 22. Method according to claim 20 **characterised by that** said head part (42) is at least partly cone shaped.

30 23. Method according to claim 20 **characterised by that** the method further comprise steps of joining at least partly said head part (42) to a bulk part (41) of said preform.

24. Method according to claim 23 **characterised by that** said step of joining precede said step of heating.

35 25. Method according to claim 23 **characterised by that** said step of joining further comprises steps of melting and solidifying.